What is claimed is:

1. A blood clot filter, comprising:

a plurality of filter legs each having a proximal section and a distal section, each of said plurality of filter legs formed at least in part of a shape-memory material actuatable between a centering configuration and a filtering configuration.

2. The blood clot filter of claim 1, wherein the centering configuration of said plurality of elongated filter legs includes a bend region adapted to center the filter when placed within a blood vessel.

3. The blood clot filter of claim 1, further comprising attachment means on the distal section of each filter leg for securing the blood clot filter to the blood vessel.

4. The blood clot filter of claim 4, wherein said attachment means comprises a hook.

5. The blood clot filter of claim 1, wherein said shape-memory material is superelastic.

6. The blood clot filter of claim 1, wherein said shape-memory material comprises a nickel-titanium alloy.

7. The blood clot filter of claim 1, wherein said shape-memory material is selected from the group consisting of silver-cadmium, gold-cadmium, gold-copper-zinc, copper-aluminum-nickel, copper-gold-zinc, copper-zinc, copper-zinc-aluminum, copper-zinc-tin, copper-zinc-silicon, iron-beryllium, iron-nickel-titanium-cobalt, iron-platinum, indium-thallium, iron-manganese, nickel-titanium-cobalt, or copper-tin.

8. The blood clot filter of claim 1, wherein said shape-memory material is configured to transform from martensite to austenite at body temperature.

9. The blood clot filter of claim 1, wherein said shape-memory material is configured to transform from martensite to austenite below body temperature.

10. The blood clot filter of claim 1, wherein said shape-memory material is configured to transform from martensite to austenite above body temperature.

11. The blood clot filter of claim 1, wherein said bend region forms a pad configured to abut the wall of the blood vessel.

12. The blood clot filter of claim 1, wherein said blood clot filter includes a lubricious coating.

13. A blood clot filter, comprising:

a plurality of filter legs each having a proximal section and a distal section, each of said plurality of elongated filter legs formed at least in part of a shape-memory material actuatable between a centering configuration and a filtering configuration, the centering configuration of said plurality of elongated filter legs including a bend region forming a pad configured to abut the vessel wall to center the filter when placed within a blood vessel.

14. The blood clot filter of claim 13, further comprising attachment means on the distal section of each filter leg for securing the blood clot filter to the blood vessel.

15. The blood clot filter of claim 14, wherein said attachment means comprises a hook.

16. The blood clot filter of claim 13, wherein said shape-memory material is superelastic.

17. The blood clot filter of claim 16, wherein said shape-memory material comprises a nickel-titanium alloy.

18. The blood clot filter of claim 13, wherein said shape-memory material is selected from the group consisting of silver-cadmium, gold-cadmium, gold-copper-zinc, copper-aluminum-nickel, copper-gold-zinc, copper-zinc, copper-zinc-aluminum, copper-

zinc-tin, copper-zinc-silicon, iron-beryllium, iron-nickel-titanium-cobalt, iron-platinum, indium-thallium, iron-manganese, nickel-titanium-cobalt, or copper-tin.

19. The blood clot filter of claim 13, wherein said shape-memory material is configured to transform from martensite to austenite at body temperature.

20. The blood clot filter of claim 13, wherein said shape-memory material is configured to transform from martensite to austenite below body temperature.

21. The blood clot filter of claim 13, wherein said shape-memory material is configured to transform from martensite to austenite above body temperature.

22. The blood clot filter of claim 13, wherein said blood clot filter includes a lubricious coating.

23. A blood clot filter, comprising:

an apical head; and

a plurality of filter legs each having a proximal section and a distal section, the distal section of each filter leg including attachment means configured to secure the blood clot filter to the wall of a blood vessel;

wherein each of said plurality of filter legs is formed at least in part of a shape-memory material actuatable between a centering configuration and a filtering configuration, the centering configuration of each filter leg including a bend region

forming a pad configured to abut the vessel wall to center the filter when placed within a blood vessel.

24. A blood clot filter, comprising:

an apical head defining a central longitudinal axis; and

a plurality of filter legs each having a proximal section and a distal section, the distal section of said filter legs including attachment means configured to secure the blood clot filter at a first location along the wall of a blood vessel;

wherein each of said plurality of filter legs is formed at least in part of a shape-memory material actuatable between a centering configuration and a filtering configuration, the centering configuration of each filter leg including a bend region forming a pad configured to abut the wall of the blood vessel at a second location spaced longitudinally apart from the first location to center the filter within the blood vessel.

25. A method of centering a blood clot filter within a blood vessel, comprising the steps of:

providing a blood clot filter having a plurality of filter legs each formed at least in part of a shape-memory material actuatable between a centering configuration and a filtering configuration;

loading the blood clot filter into the lumen of a delivery device and advancing the filter to a target location within the blood vessel;

heating the filter legs to a temperature sufficient to transform the shape-memory material from martensite to austenite, causing the filter legs to transform to the centering configuration; and

ejecting the blood clot filter from within the delivery device

26. The method of claim 25, wherein said temperature is body temperature.

27. The method of claim 25, wherein said temperature is above body temperature.

28. The method of claim 25, wherein said temperature is below body temperature.

29. The method of claim 25, wherein said step of heating the filter legs includes the step of injecting a heated fluid through the lumen of the delivery device.

30. A method of centering a blood clot filter within a blood vessel, comprising the steps of:

providing a blood clot filter having a plurality of filter legs each formed at least in part of a binary shape-memory material actuatable between a centering configuration and a filtering configuration;

loading the blood clot filter into the lumen of a delivery device and advancing the filter to a target location within the blood vessel;

heating the filter legs to a temperature sufficient to transform the shape-memory material from martensite to austenite, causing the filter legs to transform to the centering configuration;

ejecting the blood clot filter from within the delivery device; and

cooling the filter legs to a temperature sufficient to transform the shape-memory material back to martensite, causing the filter legs to revert to the filtering configuration.